

WHAT IS CLAIMED IS:

1. A semiconductor laser including a substrate, semiconductor layers stacked on said substrate, and a pair of resonator end surfaces opposed to each other in the direction perpendicular to the stacking direction, said semiconductor laser comprising:

a light emission side reflecting film formed on one of said resonator end surfaces;

wherein a refractive index of said reflecting film against an emission wavelength of laser light is set to a value between an effective refractive index and a refractive index of said substrate.

2. A semiconductor laser according to claim 1, wherein each of said semiconductor layers is made from a nitride based group III-V compound semiconductor containing at least one kind of group IIIB elements and at least nitrogen of group VB elements.

3. A semiconductor laser according to claim 1, wherein said substrate is made from sapphire.

4. A semiconductor laser according to claim 1, wherein said substrate is made from gallium nitride.

5. A semiconductor laser according to claim 1, wherein said reflecting film contains at least one kind of aluminum nitride, zirconium oxide, and silicon

oxynitride.

6. A semiconductor laser comprising:

a light emission function layer stack including a cladding layer and an active layer formed on one plane of a translucent substrate;

two electrodes having different polarities, which are provided on said light emission function layer stack side; and

a light leakage preventive film formed on the other plane of said translucent substrate.

7. A semiconductor laser according to claim 6, wherein said light leakage preventive film comprises a light absorbing film.

8. A semiconductor laser according to claim 6, wherein said light leakage preventive film comprises a light reflecting film.

9. A semiconductor laser according to claim 6, wherein said light leakage preventive film comprises a dielectric film.

10. A semiconductor laser according to claim 6, wherein said light leakage preventive film comprises a metal film.

11. A semiconductor laser according to claim 6, wherein a thickness of said light leakage preventive film

is set to a value of $\lambda/4n$ where λ is a wavelength of light emitted from said light emission function layer stack and n is a refractive index of said light leakage preventive film.

12. A semiconductor laser according to claim 6, wherein said light leakage preventive film comprises a multi-layer film of dielectrics, and a thickness of each layer of said multi-layer film of dielectrics is set to a value of $\lambda/4n$ where λ is a wavelength of light emitted from said light emission function layer stack and n is a refractive index of said light leakage preventive film.

13. A semiconductor laser according to claim 6, wherein each layer of said light emission function layer stack is made from a GaN base semiconductor.

14. A semiconductor laser according to claim 6, wherein said translucent substrate is made from sapphire.

15. A semiconductor laser according to claim 6, wherein said translucent substrate is made from GaN.

16. A semiconductor laser comprising:

a light emission function layer stack including a cladding layer and an active layer formed on one plane of a translucent substrate; and

an electrode serving as light leakage preventive film for shielding light and injecting a current in said

light emission function layer stack, which is formed on the other plane of said translucent substrate.

17. A semiconductor laser according to claim 16, wherein said electrode serving as light leakage preventive film comprises a light absorbing film.

18. A semiconductor laser according to claim 16, wherein said electrode serving as light leakage preventive film comprises a light reflecting film.

19. A semiconductor laser according to claim 16, wherein a thickness of said electrode serving as light leakage preventive film is set to a value of $\lambda/4n$ where λ is a wavelength of light emitted from said light emission function layer stack and n is a refractive index of said electrode serving as light leakage preventive film.

20. A semiconductor laser according to claim 16, wherein each layer of said light emission function layer stack is made from a GaN base semiconductor.

21. A semiconductor laser according to claim 16, wherein said translucent substrate is made from sapphire.

22. A semiconductor laser according to claim 16, wherein said translucent substrate is made from GaN.